



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

09/742,157

12/19/2000

Naoko Iwami

16869C-016600US

9696

20350

7590

05/16/2006

TOWNSEND AND TOWNSEND AND CREW, LLP  
TWO EMBARCADERO CENTER  
EIGHTH FLOOR  
SAN FRANCISCO, CA 94111-3834

EXAMINER

TRUONG, LAN DAI T

ART UNIT

PAPER NUMBER

2152

DATE MAILED: 05/16/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/742,157	<b>Applicant(s)</b> IWAMI ET AL.	
	<b>Examiner</b> Lan-Dai Thi Truong	<b>Art Unit</b> 2152	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 07 February 2006.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-33 is/are pending in the application.
- 4a) Of the above claim(s) 1-22 and 25 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 23-24; 26-33 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 December 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

1. This action is response to communications: application, filed 12/19/2002; amendment filed 02/07/2006. Claims 1-33 are pending; claims 1-22 and 25 are cancelled; claims 23, 27-30 are amended

2. The applicant's arguments file on 02/07/2006 have fully considered but they are moot in view with new ground for rejection

### **Claim rejections-35 USC § 102**

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

**Claims 23-27, 29-30 are rejected under 35 U.S.C. 102(e) as being anticipated by Kitamura et al. (U.S. 6,854,034), "Kitamura", herein after.**

#### **Regarding to claims 23, 29-30:**

Kitamura discloses storage system comprising:

A first I/O port for connection to a communication network: (figure 1, item 4, 23; column 3, lines 62-65)

At least a second I/O port separate from the first I/O port for connection to the communication network, the first and second I/O port each receiving write requests: (figure 1, item 4, 23; column 3, lines 62-65)

An array of media for storing information, the array comprising a plurality of disk storage units organized into a plurality of logical disks: (Kitamura discloses a single storage device is made up of a plurality of disk units (logical disks): 6854034: column 1, lines 1-29; column 3, lines 1-67)

A plurality of data paths, each data path being selectively connectable between any one of the logical disks and any one of the I/O ports: (Kitamura discloses a plurality paths supporting communication between a computer host and storage device utilizing the plural interfaces to establish connections between ports and associated logical devices: figure 2; column 5, lines 27-53; column 6, lines 37-55)

An allocator to allocate one of the data paths between one of the logical disks and one of the I/O ports based upon a data rate capability of said one data path to thereby provide a desired quality of service: (Kitamura discloses “a control manager” which is equivalent to “an allocator” searches for the best path for a connection between the host and the storage device based upon performance conditions such as storage device size or storage access rate: column 5, line 26-54; column 6, lines 33-56; column 7, lines 21-47)

**Regarding to claim 24:**

Kitamura discloses a storage system as in claim 23, which further includes the array of media includes media having different operational characteristics, and wherein the storage system allocates individual ones of the media to individual ones of the data paths to provide the

Art Unit: 2152

desired quality of service: (Kitamura discloses the characteristics of storage units are different from each others such as low-speed disk drive and high-speed disk drive; the control manager searches for the best path for a connection between the host and the storage device based upon performance conditions: column 5, line 26-54; column 6, lines 33-56; column 7, lines 21-47: column 6, lines 35-45)

**Regarding to claim 26:**

Kitamura discloses a storage system as in claim 23, which further includes the array of media comprise hard disk drives, and the different operational characteristics comprise different speed of operation: (Kitamura discloses the characteristics of storage units are different from each others such as low-speed disk drive and high-speed disk drive: column 5, line 26-54)

**Regarding to claims 27 and 31-33:**

Kitamura discloses a storage system as in claims 24 and 30, which further includes allocating ones of the array of media based upon a data rate capability of the media and a data rate capability of a communication link coupled to one of the data paths: (Kitamura discloses the control manager searches for the best path for a connection between the host and the storage device based upon performance conditions such as transmit rate: column 5, line 26-54; column 6, lines 33-56; column 7, lines 21-47: column 6, lines 35-45)

**Claim rejections-35 USC § 103**

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or descry

Art Unit: 2152

bed as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**Claim 28 is rejected under 35 U.S.C 103(a) as being un-patentable over Kitamura in view of Napolitano et al. (U.S. 6,301,605)**

**Regarding to claim 28:**

Kitamura discloses the invention substantially as disclosed in claim 24, but does not explicitly teach allocating individual ones of the media based upon a guaranteed bandwidth

In analogous art, Napolitano discloses file array architecture which is scalable in capacity and bandwidth, see (column 4, lines 58-67)

Thus, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine Napolitano's ideas of scalable in capacity and bandwidth for file array with Kitamura's system in order to increase transaction speed, and decrease system latency, (column 5, lines 1-4)

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

Art Unit: 2152

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

### Conclusions

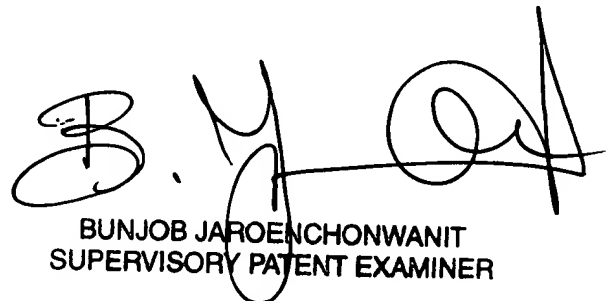
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lan-Dai Thi Truong whose telephone number is 571-272-7959. The examiner can normally be reached on Monday- Friday from 8:30am to 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bunjob A. Jaroenchonwanit can be reached on 571-272-3913. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

05/12/2006

ldt



BUNJOB JAROENCHONWANIT  
SUPERVISORY PATENT EXAMINER